CALIFORNIA ENERGY COMMISSION

1516 NINTH STREET SACRAMENTO, CA 95814-5512



March 3, 2000

Ms. Jennifer Scholl Senior Environmental Scientist URS Greiner Woodward Clyde 130 Robin Hill Road, Suite 100 Santa Barbara, CA 93117

Dear Ms. Scholl:

PASTORIA ENERGY FACILITY FIRST SET OF DATA REQUESTS

Pursuant to Title 20, California Code of Regulations, section 1716, the California Energy Commission requests the information specified in the enclosed data requests. The information requested is necessary to: 1) more fully understand the project, 2) assess whether the facility will be constructed and operated in compliance with applicable regulations, 3) assess whether the project will result in significant environmental impacts, 4) assess whether the facilities will be constructed and operated in a safe, efficient and reliable manner, and 5) assess potential mitigation measures.

This first set of data requests (#1-44) is being made in the areas of air quality, biological resources, cultural resources, land use, project description, public health, transmission system engineering, visual resources, waste management, and water resources. Written responses to the enclosed data requests are due to the Energy Commission staff on or before April 3, 2000, or at such later date as may be mutually agreed.

If you are unable to provide the information requested, need additional time, or object to providing the requested information, please send a written notice to both Commissioner Robert A. Laurie, Presiding Member of the Committee for the Pastoria Energy Facility proceeding, and to me, within 15 days of receipt of this notice. The notification must contain the reasons for not providing the information, the need for additional time and the grounds for any objections (see Title 20, California Code of Regulations section 1716 (e)).

Jennifer Scholl March 3, 2000 Page 2

If you have any questions regarding the enclosed data requests, please call me at (916) 654-4176.

Sincerely,

Kae C. Lewis Energy Facility Siting Project Manager

Enclosure

cc: Pastoria Energy Facility Proof of Service List
Tom Goff, So. Reg. San Joaquin Valley Unified APCD
Peter Cross, USFWS Endangered Species Office
Ron Daschmans, CAL- ISO Grid Planning
Bill Taube, Wheeler Ridge-Maricopa WSD
Pat Mayfield, Grid Facility Planning, SCE
Dave Rickels, Kern County Planning Department

TECHNICAL AREA: Air Quality

Author: Magdy Badr

BACKGROUND

According to the Environmental Protection Agency (EPA), all proposed offsets must be banked as emission reduction credits (ERCs) prior to issuance of the District's Preliminary Determination of Compliance (PDOC). Most of the offsets presented to the California Energy Commission, which are identified in a confidential filing, are emissions available in San Joaquin Valley Unified Air Pollution Control District's (District) ERC Bank. However, the Application of Certification (AFC) discusses potential ERCs are not banked yet.

DATA REQUEST

- 1. Please provide details on the progress of the negotiations with the ERC owners, such as letters of intent and/or option contracts, which would indicate the degree of commitment between you (applicant) and the ERC owners to enter into a sales transaction.
- 2. Have any of the un-banked offset sources being pursued by the applicant been proposed to the District for banking since the AFC was filed? If yes, please provide all the details on these sources, including copies of the banking applications. If you are planning on providing the District with new ERCs to be banked, please provide staff with a copy of the banking applications.
- the quantity of offsets for which the applicant is currently negotiating are less than
 the project's emission offset liability, failure to reach agreement on the sources,
 especially PM10 and NOx offset sources, could delay the project licensing process.
 Therefore, please identify additional PM10 and NOx offset sources to meet full
 offset liability.

BACKGROUND

Section 5.2.3.2 of the AFC discusses the potential impact of the Pastoria Energy Facility (PEF). In this section, the Applicant used the assumed meteorological data, which was supplied by the CTSREEN model package to further utilize in the refined modeling using the ISC model.

DATA REQUEST

4. Please, explain why you used the assumed meteorological data in the CTSREEN model as your basis for the more refined ISC modeling analysis.

- 5. The Applicant mentioned that meteorological data was collected from Bakersfield area and used to calculate the potential project impacts. Please summarize the results of the modeling using these data and provide the input/output modeling files.
- 6. Please summarize the PEF impacts using the most representative meteorological data (Met data) in a table and an electronic copy of your input/output files of the modeling.
- 7. Please use the same Met data to analyze the construction impact from the PEF and summarize your results in tables.
- 8. Please analyze the cumulative impact from the PEF and future projects within six miles radius from the project. If there are no future projects in the area, please provide a letter from the District indicating that.

BACKGROUND

The Applicant is proposing to install the XONON control technology on turbine trains. This commercial use of XONON would be the first use of this technology on this size combustion turbine. In other siting cases, applicants have been very reluctant to employ XONON, citing reasons such as engineering design scale-up, lack of experience on larger size combustion turbines and uncertainty of vendor guarantees. Since the PEF Applicant is proposing to use XONON, staff has the concerns identified below. In the absence of XONON, the selective catalytic reduction (SCR) will be utilized. The best available control technology (BACT) for the ammonia slip out of the SCR is 10 ppm as represented in the AFC.

- 9. Please describe the factors that convinced the Applicant to decide that XONON is an appropriate technology for the project.
- Please provide the engineering documentation and vendor guarantee information that supports your conclusions that XONON will effectively limit emissions from the proposed turbine.
- 11. Please explain how effective the XONON is during low load (part-load). Discuss the impact on NOx, PM10 and CO emissions.
- 12. The AFC indicates that in the case of using SCR, the ammonia slip will be at 10 ppm. Based on California Air Resources Board guidelines dated June 1999, BACT was recommended to be at 5 ppm for SCR. Additionally, SCR manufacturers will guarantee the 5 ppm ammonia slip when the NOx level is at 2.5 ppm averaging over one hour as proposed in the AFC. Please explain why you cannot meet BACT for ammonia at 5 ppm.

13. Please explain the potential impacts of the zero discharge of water on increasing the TDS in the water and therefore increase the PM10 emissions from cooling towers. Please provide all the calculations that support your argument.

BACKGROUND

During the initial commissioning phase of the project's operation, the three combustion turbines will be subject to changing load and testing, which may or may not include the full operation of the air pollution control equipment, such as the dry-low NOx combustors, SCR and XONON. Although there is no discussion of initial plant operation, staff needs information as to how this commissioning period will be structured from an emission control standpoint and whether specific permit conditions will need to be prepared that could be included in the Commission's license, if the project is approved.

DATA REQUEST

- 14. Please discuss the following aspects of the initial commissioning operations:
 - a. The anticipated length of time (in weeks or months) during which testing of all equipment will necessitate relief from normal operating emission limits.
 - b. The types of testing that will occur that will result in emissions in excess of the normal operating emission limits.
 - c. The magnitude of emissions (particularly NOx, CO and VOC) and the duration of excess emissions (minutes or hours) that will be addressed by special permit conditions for this initial commissioning phase.

BACKGROUND

The emission calculations presented in the AFC (Appendix I-2) appear to discount the combustion turbine start-up and shut-down from the worst case daily emissions. Furthermore, it is not clear to staff if simultaneous start-ups of two turbines or more scenario will be exercised in the operation of the PEF. Staff needs to understand how the applicant intends to operate the three combustion turbines during start-up, and reflect that assumption in the modeling analysis (used in the 8-hour and 24-hour modeling) and ultimately in permit limits.

- 15. Please explain how the daily "worst-case scenario" of the three turbines operating at full load was derived, ignoring the cold start-up emissions of all three turbines.
- 16. Please explain the start-up scenario you wish staff to presume for air quality analysis and thus for possible permit limits that would be part of the conditions of certification. Please include the sequence of the three turbines start-ups.

- 17. Please explain how you included the start-up assumptions of one turbine or more in the modeling analysis. If you did not, please reflect, in your modeling, the number of turbines that will start-up in 8-hour and 24-hour modeling analyses to establish the maximum impact from the PEF.
- 18. Please provide the detailed emission estimates guaranteed by the turbine manufacturer for all criteria pollutants.
- 19. Please make explicit the annual emission assumptions that were used to derive the values in Table 1 in Section 2 of Appendix I-3.

BACKGROUND

In order for the staff of the CEC and the District to determine compliance with all District rules, the Applicant needs to demonstrate that their project complies with certain emission limitation rules.

- 20. Please provide all assumptions and calculations to demonstrate compliance with the following San Joaquin Valley Rules:
 - a. Rule 4201 Particulate Matter Concentrations, specifically Section 3.0, Requirements.
 - b. Rule 4702 Stationary Gas Turbines, specifically Section 5.0, Requirements.
 - c. Rule 4801 Sulfur Requirements, specifically Section 3.0, Requirements.
- 21. Please discuss the trends of the existing ambient air quality conditions including all criteria pollutants around the PEF. Ambient air quality conditions should be evaluated using data from at least three meteorological monitoring stations which are located in closest proximity to the project site.

Technical Area: Biological Resources

Author: Rick York

BACKGROUND

The applicant must coordinate with the U. S. Fish and Wildlife Service since a federally listed species, the San Joaquin kit fox, may be affected by the project. In addition, construction of the project's gas supply pipeline will cross 11 streams and other watercourses. Consequently, the applicant must consult the Army Corp of Engineers and the California Department of Fish and Game to get a clear understanding of the mitigation measures that will be required to meet state and federal regulations. At present, the California Department of Fish and Game has decided that an Incidental Take Permit will not be necessary for this project since they have determined that no state protected species will be impacted by the proposed project.

This project does not have a federal nexus for the entire project, so the applicant must go through the Section 10 process, which requires the applicant to develop a Habitat Conservation Plan. The Section 10 process can take considerably longer than a Section 7 (Take Permit and Biological Opinion) process, so the Pastoria project Habitat Conservation Plan may not be finalized prior to project certification. Currently, the project is proposed for a portion of Tejon Ranch that is currently developing a Habitat Conservation Plan to address other areas that are being considered for future development by Tejon Ranch. An important consideration for this project will be the development of a Habitat Conservation Plan that addresses the San Joaquin kit fox and does not conflict with the Habitat Conservation Plan currently being developed for nearby areas of Tejon Ranch.

DATA REQUESTS

- 22. Please describe the strategy the applicant intends to follow to address the concern the U. S. Fish and Wildlife Service has raised about coordinating the development of the Pastoria Energy Facility Habitat Conservation Plan and the development of the Tejon Ranch's Valley Floor and Foothill Habitat Conservation Plan.
- 23. Please describe how the applicant's Habitat Conservation Plan intends to address the San Joaquin kit fox habitat "pinch point" issue identified by Peter Cross of the U. S. Fish and Wildlife Service.

BACKGROUND

During 1999 field surveys an unidentified *Calochortus* (a lily) species was found by the biological resources consultant and discussed in the Application for Certification. Staff has not been provided any information about the plant's final identification. Consequently, staff does not know whether the *Calochortus* is already described and a common species, subspecies or variety or a new (and possibly rare and endangered) species, subspecies or variety. Due to this uncertainty, staff intends to require the applicant to treat this plant as a sensitive species and provide suitable mitigation so the plant is avoided during project

construction. If impacts are unavoidable, staff intends to require the applicant to develop and implement mitigation measures to minimize unavoidable impacts.

DATA REQUEST

24. Please provide a draft Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) which includes the applicant's proposed strategy to avoid and/or minimize impacts to the unidentified *Calochortus*. The draft BRMIMP should also include information about, but not be restricted to, pre-construction field surveys methods, roles and responsibilities of the project's Designated Biologist, San Joaquin kit fox impact avoidance measures, worker environmental awareness training issues, project biological resources compliance and reporting schedule, post-construction clean up and habitat restoration, habitat compensation strategy, facility closure conditions, performance standards and remedial measures.

BACKGROUND

A portion of the regional (Southern California Edison) transmission system may need to be reconductored or a new transmission line installed due to the Pastoria Energy Facility project. If reconductoring or an existing line or a new transmission line is necessary as part of the Pastoria project, staff will need current (2000) biological resource information for the transmission line corridor in order to address the biological resource implications of the transmission line work.

DATA REQUEST

25. Please provide a discussion of the Pastoria Energy Facility project transmission line issue, whether spring/summer 2000 biological resources surveys are needed, who will do surveys, and any information about Southern California Edison's habitat conservation requirements (if any) they must abide by to work on their transmission lines.

Technical Area: Cultural Resources

Author: Kathy Matthews and Dorothy Torres

BACKGROUND

It is necessary that staff monitor the acquisition and compliance with any permits required by other agencies. AFC, Page 5.7-1 of the Cultural Resource Section and page J3 of Confidential Appendix J address the possibility that a U.S. Army Corps of Engineers (USACE) 404 Permit might need to be obtained.

DATA REQUEST

26. Please explain the circumstances that will trigger the need to obtain a permit and the time schedule involved in acquiring the permit. If a permit is necessary, please provide the name, address and telephone number of the appropriate contact person with the Army Corps of Engineers. The AFC states that if the permit is necessary, compliance with Section 106 of the National Historic Preservation Act (NHPA) will also be necessary. Please provide the name address and telephone number of the applicable agency contacts, if Section 106 compliance is triggered.

BACKGROUND

The AFC and Cultural Resource Section discuss newly identified potential resources TR3, TR4, TR5, TR6 and TR9 in general as milling complexes. Some of these resources are situated within the Area of Potential Effect (APE). Depending on how these areas are treated during construction and operation, there is a very strong likelihood of impacts to some of these potential resources and a minor possibility of impacts to others. Based on discussion in the AFC the impacts to these potential resources involve the disturbance of additional subsurface components such as tool flakes, human remains, or other items associated with habitation sites and milling complexes.

DATA REQUEST

27. Please provide a plan for avoidance of the potential resources where a data recovery might cause damage. The AFC states that there are additional subsurface components to some of these potential resources. Please establish site boundaries and provide a plan for presence/absence testing at any resource locations that appear to have a subsurface component (not necessarily limited to the resources listed above). Please conduct presence/absence testing and provide the results to staff.

BACKGROUND

The Confidential Appendix J discusses various proposed flood retention berms and a proposed bridge located on the plant site access road that will span a stream.

DATA REQUEST

28. Please add and identify these project features to Map J1.0-2.

Technical Area: Land Use **Author**: Amanda Stennick

BACKGROUND

Information on page 1-1 in the Introduction of the AFC briefly states that the proposed "site" is approximately 30 acres and that the project will include a 25-acre laydown area south of the proposed "site". Information in Attachment 7 of the Response to CEC Data Adequacy Comments (12/29/99) states that the applicant will seek an application from Kern County for a parcel map to "Prepare and process a tentative and final map to create a legal parcel on which to set the site". If this parcel or any other parcel is to be created for the purpose of lease, sale, or finance, its creation must comply with the California Subdivision Map Act and the Kern County Land Division Ordinance, and will require discretionary approval from Kern County. If the applicant intends any of the above, Kern County will have to rely on environmental documentation provided by CEC staff in the form of a Final Staff Assessment before they can make their determination on the tentative and final parcel maps. Therefore, in order for CEC staff to ensure that local and state LORS are met, please provide the following:

DATA REQUEST

- 29. Please explain the purpose of the tentative and final map. Please provide an Assessor's map (or other map showing acreage and Assessor's Parcel Number) of the existing parcel where the applicant proposes to create the subdivision. Please indicate the size of the resulting parcel where the power plant will be situated. Please indicate if the 25-acre "laydown site" is on another legal parcel or will be on the legally created parcel where the power plant is proposed to be built. If the 25-acre "laydown site" is not part of the proposed subdivision, please provide the Assessor's Parcel Number and size of the existing parcel where the "25-acre laydown site" is situated. Please indicate the current land use of the "25-acre laydown site". Please indicate the general plan designation and zoning of all existing and proposed (through subdivision) parcels that are part of this project.
- 30. Please provide a copy of the application for a tentative map from Kern County. Please provide CEC staff with a copy of the Kern County Land Division Ordinance. Please provide CEC staff with a copy of the tentative parcel map.

BACKGROUND

Page 3.1-2 of the AFC states that the "thirty-acre site" is under the Williamson Act. Under Government Code Section 51282, the applicant will have to apply to Kern County to cancel the contract. If the applicant intends to seek cancellation of the Williamson Act contract, Kern County will have to rely on environmental documentation provided by CEC staff in the form of a Final Staff Assessment before they can make their necessary findings for cancellation of the contract. In addition, the cancellation procedure requires a public hearing before the Kern County Board of Supervisors. Therefore, in order for CEC staff to ensure that local and state LORS are met, please provide the following:

DATA REQUEST

31. Please provide a completed copy of the Kern County application for cancellation. Please provide an assessor's parcel map indicating the parcels under contract (current land use, acreage, and assessor's parcel numbers). Please provide an assessor's parcel map of all adjacent parcels (current land use, acreage, and assessor's parcel numbers). If adjacent parcels are currently in agricultural use, please indicate the type of agriculture (grazing, irrigated, non-irrigated). Also indicate whether adjacent parcels are currently in the Williamson Act.

Technical Area: Project Description

Author: Kae Lewis

BACKGROUND

The Transmission Owner Tariff Facilities Study Agreement between Southern California Edison (SCE) and PEF identifies transmission system mitigations that will be required of the PEF in order to interconnect at the Pastoria substation. Staff needs to understand the potential environmental effects of the transmission facilities to evaluate the combined environmental effects of the PEF and all related facilities.

DATA REQUEST

32. Please provide a detailed description of all transmission mitigation facilities identified in the Facilities Study Agreement and provide the same level of environmental information that was provided in the AFC. Please refer to Appendix B of the Siting Regulations for the information requirements for transmission facilities.

BACKGROUND

In the supplemental AFC filing (January 5, 2000), the applicant identified zero discharge as its preferred project proposal and the use of deep injection wells for wastewater disposal as an alternative. At the staff workshop held on February 17, 2000, the applicant informed staff that the original Route 4 for the discharge wastewater line will be used for an alternate water supply line. This route is partially located within the administrative boundaries of the Tejon oil field. Several plugged and abandoned wells are in proximity of this route and are under the supervision of the Department of Conservation's Division of Oil, Gas and Geothermal Resources.

- 33. Please provide staff with information on the Wheeler Ridge Maricopa Water Storage District supply line to which the applicant now proposes to interconnect. The level of data needed on this supply line is equivalent to that provided in the AFC on the originally proposed water supply line (location, size, etc.). Refer to Appendix B of the Siting Regulations for information requirements for water resources.
- 34. As requested by the Department of Conservation's Division of Oil, Gas and Geothermal Resources in a letter to the Commission dated January 3, 2000 regarding the PEF, please accurately plot the water supply line along Route 4 on Division map numbers W4-2 and 430 and submit copies to both the Commission and the Division's Bakersfield office for review.

Technical Area: Public Health Author: Obed Odoemelam

BACKGROUND

Staff needs the modeling output data for the project's health risk assessment to identify the hazard indices calculated for the individual toxic pollutants. Only the input data was provided in Table 5.16-5 of the AFC.

DATA REQUEST

35. Please provide a table of the modeling output data from the project's risk assessment showing (1) the individual exposure levels used in calculating the maximum hazard indices reported in Table 5.16-6 and, (2) the individual hazard indices calculated.

Technical Area: Transmission System Engineering

Author: Mark Hesters

BACKGROUND

The System Impact Study filed at the Energy Commission on December 31, 1999 indicates that the participating transmission owner (PTO), in this case Southern California Edison, will require downstream facilities for the interconnection of the Pastoria Project. Staff needs a complete interconnection study that analyzes the Pastoria Project with the required downstream facilities. This study should analyze whether or not the new electric network with the Pastoria Project and the required downstream facilities meets applicable reliability criteria and standards.

DATA REQUEST

36. Please provide a complete interconnection study that demonstrates that the Pastoria Project and its associated downstream facilities can be reliably accommodated by the existing transmission system. The study should assure the projects compliance with North American Electric Reliability Council Planning Standards, Western System Coordinating Council and the California Independent System Operator reliability criteria. The interconnection study should confidently identify whether or not further downstream facilities are required for the reliable interconnection of the project.

TECHNICAL AREA: Visual Resources

AUTHOR: Gary Walker

BACKGROUND

Staff needs to determine the accuracy of the visual simulations provided in the AFC.

DATA REQUEST

37. Please provide information that allows a reviewer to verify that the simulated sizes of the proposed facilities are accurate. Include a description of the means for verifying the accuracy of the simulations. Provide copies of any intermediate documents used in creating the simulations, including photographs showing control points, and wire frame overlays of project components.

BACKGROUND

The AFC cites "the prevalent haze conditions" (p.5.13-16) and states that "much of the time, haze or poor visibility will partially or fully obscure the plume" (p.5.13-17). Staff needs documentation regarding the presence of haze and poor visibility, including fog.

DATA REQUEST

- 38. Please provide the following information:
 - a. Quantified estimates of the frequency, duration, and intensity of haze in the project vicinity.
 - b. Quantified estimates of the frequency, duration, and intensity of fog in the project vicinity.
 - c. Quantified estimates of the frequency and duration of limited visibility (such as less than one mile and less than five miles) in the project vicinity.
 - d. The data, assumptions, and calculations used to derive these values.

BACKGROUND

The AFC (p.5.13-4) discusses vapor plumes from the stacks and cooling towers. Staff needs to know the expected quantified characteristics of these plumes.

DATA REQUEST

39. Please provide the following information regarding each of the two cooling tower plumes:

- a. Quantified estimates of the expected maximum and average height and width.
- b. The data, assumptions, and calculations used to derive these estimates, including the model used.
- c. Quantified estimates of the expected frequency of occurrence and duration, specifying:
 - i) the number of hours that the plumes will be visible, for each hour of the day per year;
 - ii) the total number of hours per year that the plumes will be visible;
 - iii) the percentage of the total number of hours per year that the plumes will be visible;
 - iv) the number of daylight hours per year that the plumes will be visible;
 - the percentage of daylight hours per year that the plumes will be visible;
 and
 - vi) the data, assumptions, and calculations used to derive these estimates, including the model used.
- d. Please calculate the values requested in "a" and "c" above to eliminate periods when fog occurs.
- e. Please calculate the values requested in "a" and "c" above to eliminate periods when visibility will be reduced to less than specified distances (such as less than one mile and less than five miles).
- 40. Please provide the following information regarding each of the HRSG stack plumes:
 - a. Quantified estimates of the expected maximum and average height and width.
 - b. The data, assumptions, and calculations used to derive these estimates, including the identification of the model used.
 - c. Quantified estimates of the expected frequency of occurrence and duration, specifying:
 - i) the number of hours that the plumes will be visible, for each hour of the day per year;
 - ii) the total number of hours per year that the plumes will be visible;
 - iii) the percentage of the total number of hours per year that the plumes will be visible:

- iv) the number of daylight hours per year that the plumes will be visible;
- v) the percentage of daylight hours per year that the plumes will be visible; and
- vi) the data, assumptions, and calculations used to derive these estimates, including the model used.
- d. Please calculate the values requested in "a" and "c" above to eliminate periods when fog occurs.
- e. Please calculate the values requested in "a" and "c" above to eliminate periods when visibility will be reduced to less than specified distances (such as less than one mile and less than five miles).

BACKGROUND

The Response to CEC Data Adequacy Comments, dated December 29, 1999, included a Plant Site Visibility Map (Attachment 8). However, the cooling tower plumes and the HRSG stack plumes would be visible from greater distances.

- 41. Based on the response to Data Request 39 above, please estimate the maximum and typical distances from which the cooling tower plumes would be visible. Please provide a description of the visual setting of this viewshed, including the number and types of affected viewers.
- 42. Based on the response to Data Request 40 above, please estimate the maximum and typical distances from which the HRSG stack plumes would be visible. Please provide a description of the visual setting of this viewshed, including the number and types of affected viewers.

Technical Area: Waste Management

Author: Mike Ringer

BACKGROUND

The Phase I Environmental Site Assessment (ESA) listed several areas where soil may be impacted by petroleum hydrocarbons and pesticides, and recommends soil sampling in these locations.

DATA REQUEST

43. Please submit a limited Phase II ESA which presents the results of the soil sampling for petroleum hydrocarbons and pesticides based on the recommendations of the Phase I ESA.

BACKGROUND

The zero discharge wastewater treatment system will generate a solid salt cake that must be managed according to regulations determined by its chemical characteristics.

DATA REQUEST

44. Please provide calculations which show estimated levels of toxic substances of concern (from AFC Table 3.4.8-2) such as arsenic, chromium, copper, lead, selenium, and zinc in each step of the wastewater treatment system, including influent to the wastewater holding tank, influent to the brine concentrator, influent to the crystallizer, and in the final salt cake product.